

### **Abstract of the Disclosure**

A capacitive fingerprint sensor is fabricated on a plastic substrate (363) with an embedded integrated circuit chip (380). The invention describes a way to create two or three dimensional forms for electrode structures (321, 322, 325, 365, 366) that can be used to optimize the performance of the sensor. When the three dimensional structure is designed to follow the shape of a finger, a very small pressure is required when sliding the finger along the sensor surface. This way the use of the sensor is ergonomic and the measurement is made very reliable. The inventive fabrication method describes the way, how to connect and embed an integrated circuit containing measurement electronics with a batch processed larger scale electrode configuration that is used for capturing the capacitive image of the fingerprint.